

Therapeutic Biomaterials

U N I V E R S I T Y O F U T A H

Center

The Center for Therapeutic Biomaterials (CTB) prepares and uses new biomaterials for reparative medicine and the 3-D culture of human cells. Applications include clinical use in wound repair, prevention of post-surgical adhesions, and extending the life of donated organs as well as evaluation of cell response to various compounds. The biomaterials also have many non-medical applications, such as cosmetics.

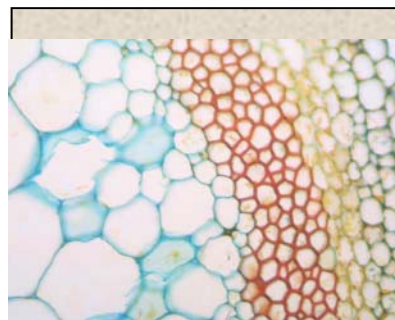
TECHNOLOGY

The CTB continues to build upon its core technology – synthetic extracellular matrix (sECM). In healthy tissue, the extracellular matrix (ECM) provides support for cells and regulates intercellular communication. After an injury, the repair process often leads to the formation of scar tissue rather than the appropriate new ECM. The sECM aids the repair process, leading to new healthy tissue. This technology has been licensed to three companies in three different fields (human, veterinary, and research). New applications include tympanic membrane repair, controlled release of steroids for reduction of inflammation, and the growth of stem cells. In addition, sECM is being used to grow “personalized” tumors for testing anti-cancer drugs that are optimized for the patient. The Center is also developing hybrid materials that combine demineralized bone matrix with sECM for repair of large bone defects.

ACCOMPLISHMENTS

In its second year, the CTB now has three spinouts (Sentrx Animal Care, Carbylan BioSurgery, and Glycosan Biosystems) and is working on additional new technologies including opportunities for human drug toxicology and improved bioprocessing protocols. Two new patent applications have also been filed. The CTB received \$1,606,000 in funding from the NIH.

The Center’s director, Dr. Prestwich, was selected as one of vSpring’s v100: Top 100 Entrepreneurs, Utah Business Magazine’s “Health Care Heroes,” and received the TIAA-CREF Greater Good Award. The sECM technology has been featured by KSL News, Science News, and Discover magazine.



THINK TANK

What if there was...

A material that mimics natural tissue that can be used to treat chronic wounds and repair bone defects?

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